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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,055	03/24/2005	Michael Harris	124-1111	1768
23117 7590 06/19/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
BRAINARD, TIMOTHY A				
ART UNIT		PAPER NUMBER		
3662				
MAIL DATE		DELIVERY MODE		
06/19/2009		PAPER		

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/529,055
Filing Date: March 24, 2005
Appellant(s): HARRIS ET AL.

Stanley C. Spooner
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/23/2009 appealing from the Office action mailed 8/22/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4963017	Schneither et al	10-1990
5082362	Schneider, John L	01-1992
5280332	Tocher et al	01-1994

2003/0184729	Bowers, Mark W.	10-2003
2002/0075472	Holton, Carvel E.	06-2002
6323941	Evans et al	11-2001
3554646	Carlson	01-1971

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 6, 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al (US 5082362). Schneider teaches (claim 1) a transmit channel for forming a variable focus transmit beam (fig 15a and 16 and col 9, line 48 to col 10, line 7 and col 11, lines 40-60), a receive channel for forming a variable focus receive beam (fig 15a and 16 and col 9, line 48 to col 10, line 7 and col 11, lines 40-60), the device is arranged such that all points of focus of the transmit beam and all points of focus of the receive beam fall on a common axis within the operable distance range of the device (figs 6a and 6b fig 15a and col 9, line 48 to col 10, line 7, and col 4 line 67 to col 5, line 21 and col 11, lines 40-60), (claim 18) the channels vary the focus by movement along a movement axis and said movement axes are not parallel (col 5, lines 15-40), (claim 2) the transmit channel comprising an optical arrangement configured to form the focused transmit beam having a lens (fig 15a and col 9, line 48 to col 10, line 7), (claim 6) an optical arrangement configured to form the focused receive beam and having at least one lens (fig 15a and col 9, line 48 to col 10, line 7), (claim 19) movement axes define an acute angle (fig 15a and col 9, line 48 to col 10, line 7).

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider as applied to claim 2 above, and further in view of Bowers (US 2003/0184729). Bowers teaches (claim 3) a laser radiation passed to the first optical arrangement via an optical fiber (fig 2, item 215). It would have been obvious to modify Schneider to include the laser radiation passed to the first optical arrangement via a transmit optical fiber because it is one of multiple design choices with new or unexpected result. Schneider (claim 4 and 5) teaches the focus of the transmit beam is adjustable by variation of the relative position of an optical arrangement with respect to a linearly translatable exit aperture of the optical fiber (fig 15c and col 10, lines 36-52).

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider as applied to claim 6 above, and further in view of Bowers. Bowers teaches (claim 7) an optical arrangement is configured to couple the received radiation in to a receive fiber (fig 2, item 229). It would have been obvious to modify Schneider to include because an optical arrangement is configured to couple the received radiation in to a receive fiber it is one of multiple methods to transmit light to a detector with no new or unexpected results. Schneider teaches (claim 8-10) the focus of the receive beam is adjustable by variation of the relative position of the second optical arrangement with respect to the entry aperture of the receive optical fiber (col 3, lines 11-19), (claim 9) the entry aperture is linearly translatable with respect to the second optical arrangement (col 3, lines 11-19), (claim 10) the exit aperture of the transmit optical fiber is linearly translatable along the optical axis of the first optical arrangement, and the entry aperture of the receive optical fiber is linearly translatable along an axis arranged at a

predetermined angle to the optical axis of the second optical arrangement (fig 6a, item 34 and fig 6a, item 39). It would have been obvious to modify the embodiment of Schneider to include the embodiment of fig 6 of Schneider because it is one of multiple design choices with no new or unexpected results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of Bowers as applied to claim 10 above, and further in view of Carlson (US 3554646). Carlson teaches the predetermined angle calculated from the inverse tangent of the ratio of the separation of transmit channel and receive channel (col 3, lines 40-43). It would have been obvious to modify Schneider in view of Bowers to include the predetermined angle calculated from the inverse tangent of the ratio of the separation of transmit channel and receive channel because it is one of multiple design choices with no new or unexpected results.

Claim 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider as applied to claim 1 above, and further in view of Tocker et al (US 5280332). Tocker teaches (claim 12) a laser device with at least one additional receive channel (figure 1 item 64 and 64'). It would have been obvious to modify Schneider to include a laser device with at least one additional receive channel where the focus of the additional receive beam is arranged to intersect the focus of the transmit beam within operable range of the device because it is one of multiple design choices with no new or unexpected results.

Claim 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider as applied to claim 1 above, and further in view of Holton (US 2002/0075472).

Holton teaches of the device configured to interact with a soft target or a distributed target (paragraph 3). It would have been obvious to modify Schneiter to include the device configured to interact with a soft target or a distributed target because it is one of multiple design choices with no new or unexpected results.

Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Schneiter as applied to claim 1 above, and further in view of Evans et al (US 6323941). Evans teaches a transmit beam formed from radiation having a wavelength in the region of 1.55 micrometers (col 10 39-31). It would have been obvious to modify Schneiter to include a transmit beam formed from radiation having a wavelength in the region of 1.55 micrometers because it is one of multiple design choices with no new or unexpected results.

Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Schneiter as applied to claim 19 above, and further in view of Carlson (US 3554646). Carlson teaches an optical lens with a focal length F , on of said channels is displaced from the other of said channels by a distance S , and θ is defined by the equation $\tan \theta = S/F$ (col 3, lines 40-43). I would have been obvious to modify Schneiter to include an optical lens with a focal length F , on of said channels is displaced from the other of said channels by a distance S , and θ is defined by the equation $\tan \theta = S/F$ because it is one of multiple design change with no new or unexpected results

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneiter et al in view of Carlson (US 3554646). Schneiter teaches a transmit channel for forming a variable focus transmit beam (fig 15a and col 9, line 48 to col 10, line 7), a

receive channel for forming a variable focus receive beam (fig 15a and col 9, line 48 to col 10, line 7), the device is arranged such that all points of focus of the transmit beam and all points of focus of the receive beam fall on a common axis within the operable distance range of the device (fig 15a and col 9, line 48 to col 10, line 7). Schneider does not teach an optical lens with a focal length F , on of said channels is displaced from the other of said channels by a distance S , and is defined by the equation $\tan \theta = S/F$. Carlson teaches an optical lens with a focal length F , on of said channels is displaced from the other of said channels by a distance S , and is defined by the equation $\tan \theta = S/F$ (col 3, lines 40-43). It would have been obvious to modify Ehbets to include an optical lens with a focal length F , on of said channels is displaced from the other of said channels by a distance S , and is defined by the equation $\tan \theta = S/F$ because it is one of multiple design changes with no new or unexpected results.

(10) Response to Argument

With regards to claims 1, 18, and 21, applicant argues **(A)** that the examiner ignores the requirements the each independent claim requires a "bistatic" laser radar device.

Response: Laser radar is a device that uses a laser beam to scan an area to create a picture of the area. As shown in figure 15a and figure 16 and described at col 10, lines 8-12, and a scanning head is utilized to control the direction of the beam that scans an area. A laser radar device is not limited to a structure that must have a coherent laser radar to enable the transmit beam to be accurately timed with respect to the receive beam to permit distance measurement and/or any Doppler shift in the frequency of the returned signal because scanning does not require this limitation in the laser radar

device. As shown in figures 15a and 16 the laser radar has a non-parallel transmit and receive beams.

With regards to claims 1, 18, and 21, applicant argues **(B)** the examiner fails to demonstrate that the cited prior art teaches a "bistatic laser radar device" and Schneider teaches only triangulation.

Response: Measuring the distance using triangulation does not preclude the device from being bistatic laser radar. Triangulation is merely a different method for determining distance to an object.

With regards to claims 1, 18, and 21, applicant argues **(C)** the examiner fails to demonstrate that the prior art teaches a "variable focus receive beam" and the cited office action states that lens 158 could be fixed but is not disclosed the lens is movable.

Response: figure 16, item 208 shows a motorized zoom lens that inherently varies the focus of the received beam (col 11, lines 49-60 and col 7, lines 34-46). The section states that the lens could be fixed implies that the lens is movable. A discussion where the lens is fixed but still variable focus is described in fig 16 where the lens is variable focus.

With regards to claims 1, 18, and 21, applicant argues **(D)** the prior art does not teach that "all points of focus of the transmit beam and all points of focus of the receive beam fall on a common axis within the operable distance range of the device.

Response: figure 6a and figure 6b show the device focusing the transmit beam and receiving beam on a far object (figure 6a) and on a near object (figure 6b). The device

on figure 15a and 16 can easily be adjusted to perform the same operation of figures 6a and 6b.

With regards to claims 1, 18, and 21, applicant argues **(E)** the examiner fails to allege that any other prior art reference teaches the claim elements and/or interrelationships which are missing from the Schneider patents and thus no combination of cited art can establish a prima facie case of obviousness.

Response: Other prior art is not required to teach the claim elements and/or interrelationships which are missing from the Schneider patents and therefore are not required to reject claims 1, 18, and 21.

Applicant argues **(F)** the examiner fails to appreciate that both Schneider patents would lead on away from the appellants combined claims.

Response: The Schneider patents teach a scanning laser to scan an area and therefore teach a laser radar.

With regards to claims 1, 2, 6, 18, and 19, applicant argues **(G)** there is no evidence of record supporting any prima facie case of anticipation rejection under 35 USC 102(b) in view of Schneider.

Response: The arguments of section A, B, C, and D have been argued above and Schneider discloses the claimed structures and interrelationships between the structures.

With regards to claims 3-5, applicant argues **(H)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of **Bowers**.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 3-5 remain. The other prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 7-10, applicant argues **(I)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of **Bowers**.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 7-10 remain. The other prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 11, applicant argues **(J)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over **Schneider (362)/Bowers** in view of **Carlson**.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 11 remain. The prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 12-13, applicant argues **(K)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of Tocker.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 12-13 remain. The prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 14-15, applicant argues **(L)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of Holton.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 14-15 remain. The prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 16, applicant argues **(M)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of Evans.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 16 remain. The prior art is not needed for the rejection of the claimed structures of claim 1.

With regards to claims 20, applicant argues **(N)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of Bowers.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 20 remain. The prior art is not needed for the rejection of the claimed structures of claim 1 and therefore are not needed for the structures of independent claim 18.

With regards to claims 21, applicant argues **(O)** there is not evidence of record supporting any prima facie case of obviousness rejection under 35 USC 103 over Schneider (362) in view of Bowers.

Response: The arguments of section A, B, C, D, E, and F have been argued above and Schneider discloses the claimed structures and interrelationships between the structures. Therefore the rejections of claims 21 remain. The prior art is not needed for the rejection of the claimed structures of claim 1 and therefore are not needed for the structures of independent claim 21.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Timothy A Brainard

/T. A. B./

Examiner, Art Unit 3662

/Thomas H. Tarcza/

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Conferees:

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